

List of Claims

The following claim listing supersedes all previous claim listings in this application.

1. (Cancelled)
2. (Cancelled).
3. (Cancelled).
4. (Cancelled).
5. (Previously amended) A multifilament yarn comprising a linear polylactic acid resin with a relative viscosity η_{rel} of 2.7 to 3.9, a Sn content of 0 to 30 ppm, a residual monomer content of 0 to 0.5% by weight, and an inert content of less than 3%, prepared from lactic acid monomers wherein at least 98 mol% of the lactic acid is an L-isomer, and wherein said yarn has a tensile strength of 3.9 cN/dtex or more and a contraction ratio in boiling water of 12% or less.
6. (Previously amended) A multifilament yarn comprising a linear polylactic acid resin with a weight average molecular weight M_w in the range of 120,000 to 220,000, a number average molecular weight M_n in the range of 60,000 to 110,000, a Sn content of 0 to 30 ppm, a residual monomer content of 0 to 0.5% by weight, and an inert content of less than 3%, prepared from lactic acid monomers wherein at least 98 mol% of the lactic acid is an L-isomer, and wherein said yarn has a tensile strength of 3.9 cN/dtex or more and a contraction ratio in boiling water of 12% or less.
7. (Previously presented) A multifilament yarn according to claim 5 having a birefringence, Δn , of 0.030 or more, and a thermal stress peak temperature of 85°C or more.
8. (Cancelled)
9. (Previously amended) A process for producing a polylactic acid resin multifilament yarn using a linear polylactic acid resin with a relative viscosity η_{rel} of in the range of 2.7 to 3.9, and an inert content of less than 3% prepared from lactic acid monomers wherein at

least 98 mol% of the lactic acid is an L-isomer, and wherein the resin contains 0 to 30 ppm of Sn and 0 to 0.5% by weight of residual monomer wherein the process steps comprise: spinning the resin at a speed in the range of 3,000 m/min to 5,000 m/min; drawing at a draw magnification factor 1.3 times or more at a temperature in the range of 100°C to 125°C; and heat-setting at a temperature in the range of 125°C to 150°C.

10. (Previously amended) A process for producing a polylactic acid multifilament yarn, with an inert content of less than 3%, using a linear polylactic acid resin with a weight average molecular weight Mw in the range of 120,000 to 220,000 and a number average molecular weight Mn in the range of 60,000 to 110,000, prepared from lactic acid monomers wherein at least 98 mol% of the lactic acid is an L-isomer, and wherein the resin contains 0 to 30 ppm of Sn and 0 to 0.5% by weight of monomer wherein the process steps comprise: spinning the resin at a speed in the range of 3,000 m/min to 5,000 m/min; drawing at a draw magnification factor of 1.3 times or more at a temperature in the range of 100°C to 125°C; and heat-setting at a temperature in the range of 125°C to 150°C.
 11. (Previously presented) A process for producing polylactic acid multifilament yarn using the polylactic acid resin according to claim 5 wherein drawing is between a first heated roller (1) and a second heated roller (2) followed by heat-setting with the second heated roller (2).
- 12-77. (Cancelled).